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Post-traumatic reactions of a rat spinal cord after transplantation of human olfactory mucosa cells

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Abstract

In the model of adult rat spinal cord contusion on the Th9 level effect of the immediate transplantation of the human olfactory mucosa cell into the damaged area were studied. No immunosuppression was used. It was shown that transplanted cells were survived as long as 7 days after transplantation and located in rostral and caudal directions in white matter on the 2 mm distance from points of injections. It was shown also that transplanted cells migrated into peripheral zone of the damaged area. The size of damaged area in white and especially in gray matters were decreased after 30 and 60 days after transplantation. The same time after 30 days after transplantation the size of pathological cavities mostly in anterior column were obviously diminished and that number of undamaged myelinated nerve fibers were increased in number around the area of transplantation.

Keywords

Olfactory mucosa cell, Spinal cord injury, Transplantation